

In the Specification

1. Please replace the second paragraph on page 2 under the "Background Art" section with the following amended paragraph:

The general process for performing QKD is described in the book by Bouwmeester et al., "The Physics of Quantum Information," Springer-Verlag 2001, in Section 2.3, pages 27-33. As described therein, During during the QKD process, Alice uses a true random number generator (TRNG) to generate a random bit for the basis ("basis bit") and a random bit for the key ("key bit") to create a qubit (e.g., using polarization or phase encoding) and sends this qubit to Bob. The collection of exchanged qubits is called the "raw key." Alice and Bob then use a public channel compare the bases used to measure the qubits and keep only those bits having the same basis. This collection of bits is called the "sifted key."

2. Please replace the first full paragraph on page 5 with the following amended paragraph:

Suppose Alice and Bob share a password P. In an example embodiment, password P is created by either using a fraction of their key generated by QKD. In another example embodiment, password P is created using one of the known method methods, such as secure currier or Diffie-Hellman protocol. In an example embodiment, Alice and Bob agree to refresh the password P at a chosen rate. Having this password, they can generate a pad p1, p2, ... pi,...pn by means of a stream cipher